

[WHEEL-END AND CENTER AXLE DISCONNECTS FOR AN ELECTRIC OR HYBRID ELECTRIC VEHICLE]

Abstract of Disclosure

This invention is a method and system to disconnect drive wheels from the powertrain of any electric powered vehicle. A vehicle controller monitors input from, for example, an inertia switch and electric motor generator conditions and can disconnect the output shaft from the drive wheels in predetermined vehicle conditions such as during a rear-end collision, or abnormal electric motor conditions such as over-torque, over-temperature, or over-current. The invention can be configured to monitor and respond to driver demand for four-wheel drive, two-wheel drive, and neutral tow. The disconnect device can comprise a disconnect actuator and joint attached to an axle disconnect. The axle disconnect can be electric or vacuum powered and positioned as a center disconnect or a wheel-end disconnect. The invention can be configured for conventional or limited slip axles.

Variable	Mean	SD	Min	Max	Median	Q1	Q3	Mode	Skewness	Kurtosis	Normality
Age	35.2	12.5	18	65	32	28	38	35	0.15	3.2	0.95
Gender	0.55	0.50	0	1	0	0	1	0	-0.05	1.5	0.98
Marital Status	0.70	0.46	0	1	0	0	1	0	-0.10	1.8	0.97
Education	12.5	2.5	8	16	12	11	13	12	0.20	3.5	0.92
Income	1500	500	500	3000	1200	800	1800	1000	0.30	4.0	0.88
Occupation	1.5	1.0	1	5	2	1	4	1	-0.20	2.5	0.96
Health Status	0.80	0.40	0	1	0	0	1	0	-0.15	1.6	0.97
Stress Level	3.5	1.5	1	5	3	2	4	2	0.10	3.0	0.94
Life Satisfaction	4.0	1.0	1	5	4	3	5	3	-0.10	2.8	0.96
Resilience	2.5	1.0	1	4	2	1	3	1	0.20	3.5	0.91
Optimism	3.0	1.0	1	4	3	2	4	2	-0.10	2.9	0.97
Gratitude	3.5	1.0	1	4	3	2	4	2	-0.10	2.9	0.97
Self-Esteem	3.0	1.0	1	4	3	2	4	2	-0.10	2.9	0.97
Life Purpose	3.0	1.0	1	4	3	2	4	2	-0.10	2.9	0.97
Meaning in Life	3.0	1.0	1	4	3	2	4	2	-0.10	2.9	0.97
Existential Well-being	3.0	1.0	1	4	3	2	4	2	-0.10	2.9	0.97
Overall Well-being	3.0	1.0	1	4	3	2	4	2	-0.10	2.9	0.97